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SPEECH-HESITATION

E. J. Ellery Thorpe.



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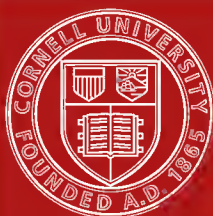
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PRESIDENT'S OFFICE,
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I have just read "Speech Hesitation" by Mrs. E. J. Thorpe, with much interest.

Her method has the distinct advantage over nearly all others that I have known in that it is laid on a definite, and, as I think, a correct conception of what are probably the most common causes of the difficulty and seeks by a rational and systematic method to remove them. I am not surprised at the success she has met with, because, too, of the careful study of individual cases upon which she bases her treatment.

The whole subject is one of the most peculiar and scientifically interesting in all the field of education. I am heartily in accord with her conviction that one of the most urgent needs in view of the large per cent. afflicted, and of the kind of treatment needed, is for an institution where this very grave and painful, but most curable affliction of childhood and youth can be treated with conditions so controlled as to make the prospect of cure most favorable.

Wealthy philanthropists, and, if need be, legislators should be appealed to.

May 30, 1899.

G. STANLEY HALL.

SPEECH - HESITATION

BY

E. J. ELLERY THORPE



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1898

BY E. J. E. THORPE

TO MY PUPILS,
WHO HAVE FURNISHED THE MEANS BY WHICH
THESE TRUTHS HAVE BEEN EVOLVED,
THIS SMALL VOLUME IS AFFECTIONATELY DEDICATED.
E. J. E. THORPE.

Newton Centre, Mass.

SPEECH-HESITATION

CHAPTER I.

It is curious to observe how a man of a clear, sharp and powerful mind and reasoning according to sound and correct principles may yet, owing to his defective knowledge of facts, arrive at conclusions directly opposed to truth.—MAX MULLER.

A LOVE of dramatic reading in early youth, and the foundation in general voice-training laid by seminary and normal school drill in singing and in oratory, together with membership in the New York Harmonic Society and in choirs, including that of Plymouth Church; association and practice with graduates of the best schools of oratory, notably with one who had studied under the famous James E. Murdoch, and who brought to me the best thought of that great actor and elocutionist, were the means by which my attention was called to the physical affection that is the subject of this book.

Together my friend and I studied the various methods of breathing, practiced the stroke of the glottis and the formation of sound at the front of the mouth, and gave much attention to articulation. But speech-affection at that time was not a matter that engaged the attention of the general educator. In my several years' teaching in one of the largest public schools of New York City—

the daily attendance in its primary department averaging over 1,000—and where the teachers constantly met to discuss educational needs—I observed that no allusion was ever made to any case of hesitancy in speech that might exist among the pupils.

It is now more than thirty years since I began to study my first case of this affection, and it seemed to my inexperienced mind like a new form of a very old difficulty,—one that would yield readily to the ordinary vocal drill. In utter ignorance that this was one of the greatest problems, that medical men and philosophers had studied it carefully, that many theories had been advanced and much done to find the cause and the remedy, I set to work with the greatest enthusiasm. I reasoned that as the subject failed to produce certain sounds, therefore he must learn their nature, and practice until he could produce them. This reasoning was false, as was afterward seen.

The breathing-exercises and articulations were practiced diligently, in full expectation of complete success. The contraction of the vocal cords, which prevented the formation of the vowel-sounds, and the want of control of lips and tongue were supposed to be caused by weakness; therefore, lips, tongue, and vocal cords were exercised in the expectation that increased strength would give greater freedom of action. The theory was that clearness in speaking must come through phonic drill;

but the more conscientious the training, the less capable were the vocal organs of doing their work.

Great attention was given to the refractory sounds, always supposing them to be consonants. They were practiced before and after the vowels; words in which they and their combinations occurred were woven into sentences, and readings were selected for this especial purpose. When a half day had been spent in this way, the pupil was sent out to make a trial of his strength on some errand or by the use of these particular words among his playmates. The invariable report on his return would be:

"I could not speak the words. They never were so hard before."

"But," I would say, "you have said them to me hundreds of times. Why could you not say them then?"

"I do not know, but it was impossible to speak them."

Slowly and vaguely the truth began to dawn upon my mind that this kind of drill was emphasizing and increasing, rather than decreasing, the difficulty, and, consequently, adding to a fear that the pupil had of trying to make these sounds. I began to see that, once made, he could go on repeating them indefinitely; but that after an interval they were as difficult as before.

There was a baffling, inexplicable mystery in it that

surprised and interested me. I felt assured that *someone* must know all about it. My friends, the elocutionists, were consulted, and their opinions agreed perfectly with all that had been done. One of the best authorities said to me: "The breathing must be corrected, and there is but one way to form each sound. This must be learned. These two things accomplished, anyone must be able to talk." As time went on, quite a number having the difficulty trusted themselves to my experiments, and some really gained confidence and were improved. Some persons can by such drill go so far as to declaim, perhaps, in public. This accounts for a great many so-called "cures," and assists greatly in filling tables of statistics. Someone has said: "There are three kinds of untruths: Lies, white lies, and statistics;" and when statistics are made on this basis, we may well question their validity.

It is not unusual that one can speak upon the platform who in private converses with the greatest difficulty. He can do something. The average person who hesitates can talk or declaim, at times, but the contraction is there, always ready to assert itself. While that is true, he is practically no better, because nothing new has been introduced, and the work, on the whole, is not satisfactory. My work was pursued as one works upon a puzzle. At times a clue would seem to be found, only to disappear

and leave the matter as dark as before. The questions were beginning to arise: "If these persons can sometimes speak words voluntarily and can repeat them after they have been spoken by others, do they need to learn their construction? If the breathing is perfect before the attempt to speak, is it the breathing that affects the speech, or the speech that affects the breathing?"

At this stage of investigation the Centennial took me to Philadelphia, and a call was made upon Mme. Seiler. I had read her "Voice in Speaking" and "Voice in Singing," and knew her by reputation as one skilled in voice-training, and also that she had received some pupils who needed instruction in speaking. She talked freely upon the subject. She said that although the voice in singing was her special work, she had by request taken pupils who needed instruction in speaking. Her plan was to train the pupil first upon the least difficult sounds, and when these were conquered he went on to those that were more difficult, and was drilled in this way until he had mastered them all.

Then I asked: "What does he do when away from you? Can he make these sounds then?"

She said: "I have never inquired. If he can speak every word when with me, why can he not do the same when away from me?"

I replied: "That is the special difficulty. They all can read and talk with me after a certain time, but when away from me the sounds are as difficult as before,—perhaps more so."

Then she said: "You have gone farther in this matter than I have, and it is of no use to talk with me."

Mme. Seiler invited me to be present while she gave a lesson in vocal music. It differed from anything in vocal training than I had heard before. She said, "You must make a tunnel of your body; there must be no stop along the way." I saw that those who hesitate in speaking *do* stop along the way, and that the ordinary theory of diaphragmatic breathing and speaking is a theory only when coupled with phonic drill.

Up to this time the difficulty seemed to be entirely with the consonants, but a case came under my care in which the vowels stopped in the throat. The muscles of the throat closed and prevented the possibility of making any sound. Plainly the sharp attack upon the vowel with the throat-muscles, which had been a conspicuous part of my education, would never do in a case like this, and I groped my way toward the open passage theory, first experimenting upon myself. Yet so strong was the influence of long training and deeply rooted prejudice that although the effect was at least partly clear, it was ten years before the old method was given up entirely. It

was held so long, partly because the truth dawned so slowly and partly because of the question: "If this is given up, what remains to be done?"

My efforts in articulative training ended with a boy who told me that a certain sound was impossible to him. Without letting him know, I managed to introduce that sound continually; but the next day it was more trying than before, and besides, other sounds, apparently easy, had become suddenly difficult. That experience sufficed, and ended my practice of articulative drill. Some of the persons who received that drill would go away alone. Perhaps they would spend a day in the woods, and work upon the troublesome sounds with a fixed determination that they should be conquered. What they really did was to strengthen and to increase a muscular contraction that was the cause of the trouble, and to increase the dread of sounds that had become already objects of fear. It would be well if the work of those years could be recalled; but as my work has led on to better methods I have felt the force of Phillips Brooks's words, which were of course applied to quite a different realm of thought: "Why mourn your sins? They are the stepping-stones to a higher life."

Lengthening the sound is practically singing, and with few exceptions the persons who hesitate in speaking are able to sing. Length without strength is a drawl, and

drawling is not speaking in the best manner. In speaking, we utilize the outgoing breath, but are not expected to lengthen that breath much beyond its ordinary use. It is necessary for some persons to work deliberately at first until they have acquired a habit of placing the energy correctly; but we must not rely so much upon the means as to forget the object to be attained. The door of truth opens slowly, and often we think that we have reached the main entrance when we have found only the guide-board that points to the outer portal.

New difficulties arose. Practicing articulations in such a way as to eliminate the effort introduced an abnormal care and increased the fear, which was always a serious complication. Besides, the words lacked character; the life seemed to be gone from them. There was constant danger of being asked to repeat, an experience that the pupil always greatly dreaded. The care exercised in lessening the force upon the consonants brought them more prominently before the mind, and increased the morbid mental condition; and if consonants were so much reduced, on what were we to rely in making ourselves understood? Confident that the question must have been answered by someone somewhere, all the literature to be found upon the subject was thoroughly investigated. In studying various methods, I was greatly assisted by those published by Edgar S. Werner in his *Voice Magazine*.

A physician has said, "The subject has not received the attention it deserves from physicians." But except Lord Bacon, Aristotle, Mendelssohn, and a few others, those who have written upon it have been among the conspicuous physicians of their time, and each writer, almost without exception, had a personal interest in finding the truth.

The list of writers (including Hippocrates, 300 B. C., who believed the cause to be dryness of the tongue) is too long to be given here. The various causes given were a lesion of the brain, nervous affections, spasm or closure of the glottis, abnormal conditions of the tongue, uvula, palate, pharynx, hyoid-bone, jaw or teeth, imperfect respiration, sluggish mentality, muscular debility, physical influences, bad vocalization, timidity, diseased tonsils or nasal cavities, paralysis, contraction of the genioglossus muscles, retraction of the lingual muscles, etc. But all my subsequent experience goes to prove that in each particular, effect was mistaken for cause. As remedies, the oldest practitioners used lotions, gargles and washes for the tongue and the neck. Following these were eminent authorities, who practiced breathing, articulative exercises and rhythm. During the year 1841 surgical operations raged till stopped by government authority.

Mechanical contrivances, beginning with the pebbles

of Demosthenes and continuing in the fork of Itard, the ivory plates of Colombat, the whalebone of Malebouche, the piece of wood under the tongue by Dr. Klencke, and Bates's appliances, are in some form in use at the present day.

The use of tricks began in 1837 with the American method of Mrs. Leigh, which was striking the tongue against the roof of the mouth. Dr. Arnott suggested placing short *e* before every word. Dr. Voisin in 1837 pressed the thumb upon the chin. Dr. Graves (1848) suggested holding a stick in the right hand, with which to strike the forefinger of the left. The object of the trick being to direct the attention of the person from himself, any movement not in general use would serve the purpose. The marketable tricks of the present time are: Pressing together the thumb and the finger, winking, waving the hand, turning a roll of paper, throwing back the head, etc. These are sold as great secrets. They are long-lived, because human nature loves mystery.

In this medley of opinion the question was, What, if anything, is right? for the supporters of each theory were in their day of highest standing and reputation. And again, can rhythm, any vocal gymnastic or surgical operation or trick, remove chorea, lesion of the brain, or spasm of the glottis? Dr. Chigon (1838) asked, "How can a disease be removed before we know

the cause?" Some physicians said, "We do not know the cause, and we never can know; all attempts to relieve the difficulty are therefore in the nature of a fraud." Others said: "We do not know what hesitation of speech is, but we are waiting for the light."

While endeavoring from this confusion of authority to extract some general law, a clergyman friend lost his voice because of a serious throat-affection, and found it through Mme. Seiler's instruction; not in the harsh, hard tones that were symptomatic of all that was incorrect, but in tones beautiful and melodious, as a voice must be, formed upon nature's plan. As he described in detail the process of instruction that he had received, there came to my mind the dawning of a great light, which has steadily increased. It occurred to me to make a comparison between the symptoms in his case and those of some upon whom I was experimenting for speech-trouble. They seemed alike in so many respects that a trial of the process, so far as I was able to reproduce it, was made upon my pupils with entire success. What was done was to remove all undue contraction from † the throat and to strengthen the breathing-muscles. A close comparison of every new case with every other showed the inevitable symptom of throat-contraction. It is surprising how long it may be, after a principle is accepted as truth, before it is clear in all its relations. But

what was at first vague and experimental, by slow degrees became clear and positive.

Nervousness always exists in this form of physical derangement. The usual explanation was, "I hesitate because I am so nervous." But when relief came the patient would say, "I am no more nervous now than other persons." The question was, Do nervousness and throat-contraction exist as independent symptoms, or does one cause the other,—and which is the cause? The answer came through a child six years old, who had St. Vitus's dance. The opinion of the highest authority was that the speech-irregularity was caused by chronic chorea; therefore she could never talk. By pursuing the usual plan of removing the throat-contraction, in less than three months she spoke perfectly, and every trace of the chorea had disappeared. That was several years ago, and there has been no return of the difficulty. The mother was wise. Until the child was able to play with other children without excitement, she was kept by herself, and it was a year at least after her speech was perfect before she was allowed to enter school. This case was sufficiently marked to settle the question of cause and effect in regard to nervousness, and all subsequent experience has strengthened the position. The whole difficulty was that the grasp of the breath, which should have been in the breathing-muscles, was placed upon the muscles of

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the throat where the breath must pass, and with force sufficient to throw the whole system into disorder.

As the years went on, a large number of cases in every varying degree of severity received the treatment, which experience was constantly rendering more certain. Some of the cases were even more severe than that of the little girl previously mentioned. They were of long standing, and in some cases the subjects of them could not appear before the world; but whenever the instructions were followed, the case yielded to the treatment, and there was no reason to change the opinion that throat-contraction was the foundation of the difficulty, and its removal the one definite aim.

But why the throat-contraction? Not infrequently was reported inability properly to control the pen while writing. Often persons who were physically weak and who could walk but short distances would, as the effort was taken from the speech, become strong and able to walk for miles without fatigue. This led to a general study of voices, and the amount of throat-contraction in those of young children—even in infants—was a revelation.

A young lady eighteen years old had been an invalid all her life. At birth she was with difficulty made to breathe. Her limbs were weak, and she walked and used

her hands very little. She was constantly under medical treatment, from which she received no permanent benefit. Her voice was very weak, and she seldom spoke except in answer to a question. Though her speech was free from impediment, with every attempt to speak her head swayed from side to side and her hands were twisted with great energy. The speaking-force was focused in the muscles of the neck and the hands, and it was those muscles that were first in action when she began to speak. All that she needed was a voice properly placed, and when that was gained she walked miles without fatigue. Whereas she had been unable to lift a cup filled with any liquid, she could without effort raise a good-sized pitcher and pour the water from it; and she could read aloud for hours and talk with the utmost freedom.

A boy nine years old dragged his right foot, and the right hand and arm were useless. His voice was an aspirate, and his face was a mass of contractions. His speech was an illustration of extreme hesitation. At birth he did not breathe perceptibly for an hour. For some days he made no sound, and it was a month before he made what could be called a cry. He, too, needed a voice, and when it came, strength came to the leg and the arm, and the contraction left the face and centred in the breathing-muscles.

A person who had become interested in these investigations urged visiting a hospital for children, where were some cases answering this description. The symptoms were the same, in a greatly exaggerated form. One boy in particular was an embodied, extreme example of all that had been seen in a large number of cases. These symptoms had been found distributed among many persons. For instance, one was weak in the fingers; another in the legs. In one the contraction was in the wrists; another, perhaps, in the jaw or the tongue. One would be troubled with bronchitis; another with throat-disease. The tongue might be so large as to interfere with swallowing. Sometimes the eye could not be fixed upon any object, and often there were growths in the nasal passage.

With the exception of the last, all these symptoms were concentrated in this one boy, and every one was strongly marked. All that great strength which should have been gathered in the breathing-muscles centred in the throat, tongue, lower jaw and wrists. The constant movement and abnormal energy centred in the jaw and the tongue caused a profuse flow of saliva. The size of the tongue was increased by the unusual exercise; the effort in the throat caused bronchitis. The preponderance of muscular energy went to the wrists and lower jaw and tongue,

and the fingers and legs and feet were quite helpless. The wrists were very strong and abnormally developed. The eyes were never fixed upon any object, the shoulders were lifted, and the head was never erect. The responsive instinct was there, in full force, and when one spoke to the child all these false centres were roused to full activity.

Naturally, as there was no avenue through which the mind could operate, all the usual channels being barred and shut off, the mind was supposed to be wanting. He was laid upon a rug on the floor, and told to kick. Instantly the limp feet flew, propelled from the hips. Three things were noted: First, he knew what the word "kick" meant; second, he was not so much paralyzed but that he could kick; third, he was pleased and delighted to follow any suggestion to the best of his ability. He had repeatedly heard and understood that his case was hopeless, and he eagerly caught upon even a ray of hope.

With permission from the medical committee experiments were made upon him, and the boy's conscientious spirit was a great assistance. In six weeks the symptoms all were changed for the better. In about a year he used his feet, legs and hands very well. His head was erect, and the condition of his eyes normal. The contraction about the throat, tongue and jaw was so reduced that he

was able to speak quite a list of words, and connect some of them. Several others at the hospital also received the benefit of the training. Some were permanently benefited.

The teacher took what was thought would be a vacation, but saw no time to return, and the boy from whom so much was learned, and to whom we were so much indebted, was allowed to relapse. At birth he did not breathe perceptibly for two hours, and he never made a vocal sound till taught by us. At first his efforts were a kind of groan, directed into the lower jaw; but he understood the aim, and kept at work, and constantly gained. If I had known then, as I do now, that the natural strength must exceed the unnatural, before one is safe in being left to himself, probably some way would have been found to complete the work. To train a voice that already exists is an easier task than to create one. The wonderful feature in this case was that the boy so well understood and put into practice the lessons taught him.

CHAPTER II.

Starting with the unquestionable truth that at any moment the existing quantity of liberated nerve-force, which in an inscrutable way produces in us the state we call "feeling," must generate an equivalent manifestation of force somewhere, it clearly follows that if, of the several channels it may take, one is wholly or partly closed, more must be taken by the others; or that if two are closed, the discharge along one must be more intense; and that, conversely, should anything determine an unusual efflux in one direction, there will be a diminished efflux in other directions.—*Herbert Spencer.*

In the universe taken as a whole, evolution of one part must be at the expense of some other part.—*Le Conte.*

BREATH, held with firmness by the breathing-muscles and released with energy, is the essential element of all vocal sound. Voice, which, developed, becomes speech, begins with the life. In the first cry of life there are three conditions: Inspiration, muscular grasp, release; first, the inspiration, which fills the lungs; second, the grasp of that inspiration by every muscle used in breathing, or the concentration of energy, by which the breath is firmly held and controlled; third, the release, by which the breath is driven against the vocal cords, producing the cry, which varies in different children, from a clear, full, strong, flexible and controlled tone, which by its quality indicates that every muscle

uses to its full capacity all the energy that nature provides for the purpose, to the faintest aspirate, which also indicates by the varying degrees of strength the amount of power unused by the breathing-muscles.

But the unused power is not lost. If turned from its legitimate use in the breathing-muscles, it will certainly be at work in another place. The repetition of the cry by the child has been called an "acquired reflex." If the cry is according to nature, every repetition strengthens the entire system, working from the centre to the periphery. But if the muscular grasp, which is the centre, is weak, not only does the system suffer from the loss of the legitimate exercise but the surplus energy, acting in the wrong place, is a cause of derangement and disease. The grasp of the breath, in order to produce vocal sound, is in accord with nature's law, and if the conditions are perfect, is, in every instance it is called into exercise, as unstudied and unpremeditated as in the first cry of the child.

The child cries because he must. It is nature's provision for sending life and strength into every fibre of his being, and every cry is laying a foundation for future use in speech and in song. As intelligence grows, the tone is varied to express different emotions, followed by gesticulations of the feet, hands and head, and these by a

great deal of meaningless movement of lips and tongue.

The first definite voice or vowel sound is short *u* or *ugh*. It is the natural response of the lower animal, the savage and the little child, and is the radical of every vowel, when properly made. The child learns articulations, which are the refinement of gesture, by imitation, and the greater his power of imitation, the earlier he learns to talk.

The muscles that move the tongue and the jaw in mastication are the same as are used in forming articulations or consonants. The same stream of breath that forms the vowel gives expression to the articulations, which may be called the finish to the vowel-sound.

Supposing the concentration of energy in the breathing-muscles to have been complete from the first cry till the child begins to talk, no abnormal energy can be placed upon the articulation. Therefore, it offers no obstruction to the passage of the breath, because vowel and articulation blend in a perfect whole, and the harmony is complete. In speech, so conditioned, the tones may be low, but never weak; reposeful, but always energetic; and as life goes on, by constant use they can easily be adapted to any requirement of public and private use. It is only from the centre that the voice can expand and develop to a variety of pitch and increase of compass. The founda-

tion for the voice, in all pulpit and platform oratory, dramatic speaking and singing, is but a broadening from the current melody of the speaking-voice, which depends in every case upon the perfect grasp at the centre. The child who has held the perfect control of his voice from the beginning until he is old enough to talk, not only has established a vital power in every nerve-centre, muscle and fibre of his system, but is so confirmed in that control that he is not likely to be affected by any subsequent influence.

The non-vocalized breath is inspiration and expiration. With this, life may go on and the breathing be perfect; but there can be no vocal sound without the grasp or stop of the breath. We give a great deal of time to the study of how best to breathe. Perhaps it would be better, did we learn how to stop breathing in the best manner. The grasp of the breath forms the centre of the respiratory system. This is inevitable, and any degree of weakness at the true centre indicates a corresponding abnormal strength, first evident in the throat-muscles. The symptoms are weak, high-pitched, shrill, nasal, or harsh voices, inability to read for even a few minutes without pain in the throat, hoarseness, loss of voice and tendency to throat-disease. Such persons may suffer from nervousness, general weakness, or a kind of invalidism that seems

to have no explainable cause. The constant use of the throat-muscles gives a tendency to lift from the true centre and to focus at the throat. If the contraction centres at the vocal cords in sufficient force seriously to impede or stop the breath, speech-hesitation in its uncomplicated form will be the result.

Although, according to my observation, the contraction begins at the throat-muscles, it may focus in greater strength at other points, affecting the speech only indirectly. If the force of the contraction is below the vocal cords, the throat may not be seriously affected, but the entire system is liable to feel the strain. If the speaker is a clergyman, he may be obliged to resign his charge. A rest will bring relief, but a return to public speaking, unless the manner of using the voice is changed, will cause a return of the symptoms.

A cripple at a hospital spoke with the quality of voice that comes from the use of those muscles. He had evidently used them from the beginning with every attempt to speak. Some public speakers are saved from a similar condition because that voice is used only in addressing an audience. The focusing of the contraction in the muscles above the vocal cords is the cause of what is known as clergyman's and teacher's sore throat. When called upon to use more power than is required in the or-

dinary conversational tone, the throat-contraction is increased, and the consequence is throat-disease. Upon the same principle children, when at play, scream into their throats with most destructive energy, which accounts for the excision of so many tonsils. The use of the voice through the breathing-muscles is invigorating and strengthening, but through the throat-muscles it is weakening and dispiriting. The teacher raises his voice in order to be heard by a roomful of pupils, and the greater the interest in his work, the greater the strain. Some clergymen perform the entire service in an easy, conversational style, clear and restful to the hearer, which leaves the speaker physically stronger than before. Others make the prayer, read the Scriptures and the hymn and give the text well, but when they begin to warm to their subject, the lift begins toward the throat, increasing in intensity to the end.

One who is accustomed to the study of the voice from this point of view can easily detect, from its quality, when the hold on the breathing-muscles begins to weaken, and can note the exact location of its upward tendency, till it fastens itself upon some point about the throat. An education of this kind is probably of more value than the use of a laryngoscope. If the contraction focuses in the muscles at the sides of the neck, the head may in the

act of speaking bend from side to side. In a few such cases, when also the contraction is great in the lower jaw, it has been attended with loss of hearing, which the pupil has reported to me as relieved when the contraction is removed. If the contraction focuses in the muscles at the back of the neck, it is marked in slight cases by a pain in those muscles, when tired or excited. In more severe cases the head may shake, as in palsy. In all these cases, although the contraction may remain through life about the same, the tendency, as a rule, is to communicate from one nerve-centre to another,—to the shoulders, hands and feet, till the entire system is under its influence. The distance is wide between a slight effort made upon the throat-muscles and the cripple at the hospital, but the line of retrogression is complete.

Many persons, in performing any work with the hands, will repeat their motion with the lips and the facial muscles. We all have met persons walking on the street or on the deck of a steamer, with every muscle of the face in a state of contraction. How many can think intently while lying down, and leave the head to drop a dead weight upon the pillow? The twisting of the fingers by children, and by grown persons as well, when they think they are sitting quite still, and the fidgeting with the leaves of a book while reading, are evidences of an activity at the periphery that should be at the centre.

Many persons, in walking, hold the hands, wrists and elbows in a state of tension, instead of allowing the arms to swing from the shoulder. It is an indication that the arms are controlled by an over-tension of the muscles about the throat and the neck. All cases of writer's cramp that I have known arose from this cause. Many persons are conscious of a tightening of the throat-muscles, which become a pain, when playing a game, reading an exciting book, or doing anything that awakens interest. Sometimes, as in shooting at a mark, or in doing anything that requires close attention, the whole system is tense and rigid. A little girl who had St. Vitus's dance as a consequence of the contraction held broken sticks in her hands, shaking them continually. The act seemed to be an outlet for the abnormal energy. As she grew strong at the centre, that exercise was gradually dropped. Some children twist the hair or the ears, and others keep always a string, piece of paper, or something, to work upon with the fingers.

This misplaced energy in jaw and in throat is the constriction that all trainers of the voice are obliged to meet. The hold or grasp of the breath is what distinguishes the vocalized from the non-vocalized breath. It is so essential that it may almost be called the speech. We begin to speak wherever it is located. It is a great energy,—

how great, probably no one knows with exactness, but it has been estimated to be equal to a thousand pounds. We are wholly unconscious of the force if it is in the right place. If we begin to speak at any point above the diaphragm, the speech suffers according to the location, the amount of misplaced energy and the temperament of the speaker. If all the energy is centred at any such point, there can be no speech, because it is only force in the breathing-muscles that can drive the breath against the vocal cords; and as the breath, whether vocalized or not, must pass through the glottis, it is plain that if the muscles at the glottis tie up the passage, the speech is hindered in the degree of the force of the contraction.

This is the distinguishing symptom in speech-hesitation. It is one cause of spasm of the glottis. If the contraction stops at the glottis, only the vowels are hindered; but if it extends, as it usually does, to the lips and the tongue, the consonants also are affected. Consonants have been called breath-obstructions; but they are as dependent as are the vowels upon the free passage of the breath, and they never obstruct, except when contraction of lips and tongue enter into their formation.

Four persons were suffering with contraction in different forms. Two were school-teachers, one of whom was an invalid. Her voice was weak and her throat dis-

eased, and she was trying change of climate and rest in hope of finding relief. The other was obliged to give up teaching on account of hoarseness. Besides the other remedies, she practiced gymnastic exercises, and consequently lost her voice altogether, because gymnastics increased the peripheral strength. When the physical exercises were given up, the hoarse voice returned. She said that with any slight excitement, as interesting reading or the playing of games, the muscles of the throat closed tightly.

The third case had been an invalid from childhood, with the contraction focused in the muscles in the side of the neck and the hands. There was no hesitation in speaking any word, but the head bent from side to side, and the contraction had reached the hands. At birth it was with difficulty that she was made to breathe.

The fourth was a case of speech-hesitancy, the contraction being in the vocal cords. It was the least complicated of all, because the contraction had not reached far beyond the focusing point. In each case the voice was weak and pitched on a high key.

It is only a voice that is free from that contraction—and the percentage of such voices is small—that can be readily adapted to the varied requirements of life, from the low, quiet tone necessary in the sick-room, to the

strong, clear tone that will fill every part of a large audience room. The voice can not expand from the throat. A large class of persons, who never fail to go on, are so nicely balanced as to be very nervous about speaking in unusual places, but never having been quite stopped, they do not know the cause. Some hesitate constantly, but manage to push along, and habit renders them unconscious of any serious difficulty; and this unconsciousness may be their salvation. Others hesitate occasionally, but, as this hesitation is seldom, it does not trouble them. All these carry a weight, more or less heavy, but they do not know what the burden is or how they came by it.

Quite a percentage of persons who hesitate habitually get on very well for a time; perhaps will talk for days without revealing any difficulty, especially if difficult persons and places are avoided. In some such cases, even the neighbors whom they meet continually detect no weakness. It may be that when the conversation becomes exciting they are silent or withdraw, and this may give them the reputation of being odd or queer. I am told that some such persons, being always able to talk, when addressed on the subject of speech-difficulty will league with dealers in tricks as reference, for the revenue that may come to them. But the mass of cases are much more intricate. The tendency of the contraction is to communi-

cate from point to point, until the whole system is under its influence; and the severity of the case depends entirely upon how far the contraction reaches and the amount of rigidity it has attained.

From the vocal cords it reaches out to the jaw, tongue, lips and facial muscles, making of each a new centre as it proceeds. When the muscles of the jaw become rigid, it may cause a profuse flow of saliva, and the teeth will strike together with great force. If in the tongue, it cleaves to the roof of the mouth. If in the lips, they close together immovably. When the contraction extends through the muscles at the neck and the jaw, there may be times when the rigidity is at the extreme, when the person is unable to hear, and if it reaches to the upper part of the face, the eyes may roll about, giving the appearance of convulsions; or they may move from side to side, never being fixed upon any object. The contraction may stop here, but often it continues to the shoulders, hands and feet.

These extreme cases feel themselves under the power of a monster clutching and holding them with an irresistible power. The extreme examples of these conditions are found in hospitals in a hopelessly chronic or generally paralyzed state. In a healthy muscle, the relaxation equals the contraction. If a muscle continues contracted

too long, the result will be a partial paralysis. This frequently occurs in the lips, tongue, jaw or facial muscles, and as the vocal organs can not be controlled, to one whose attention has not been turned to this aspect of the subject they may suggest brain lesion.

As far as I have been able to observe, three generations of noticeable throat-contractions bring about an average case of hesitation. Usually it is quite evident in the grandmother, more so in the mother or father, or both, one or both of whom, perhaps, hesitates a little sometimes, but not enough to cause inconvenience. The next generation does not get on as well. Occasionally the degrees of difficulty are found in one family. In one case, the mother spoke with a great deal of effort in the throat, the boy seven years old hesitated inveterately; the child four years old could neither walk nor hold up her head; so great was the misplaced energy.

The mental phase is conspicuous in those cases in which speech-hesitation is a prominent symptom. It is a serious complication, but stands in relation to the physical as effect and not as cause. One is never afraid to do what he knows that he can do. It is true that by the constant play and interplay of the one with the other, the mental may in many cases outgrow the physical, but the origin, the root of the difficulty, lies in the latter.

When a sensitive child first learns that his speech is peculiar, he instinctively avoids meeting persons outside the circle of his immediate friends. Often a child five years old resolves not to speak to anyone except his parents and nurse, and not unusually at that early age determines not to speak at all and carries out his resolution. He does well, for he avoids the struggle and consequent nervous strain, and is in better condition to receive instruction. But usually the child tries to talk, and every effort fixes and intensifies the contraction. His playmates laugh at and imitate him, his teacher is tried, his parents pity or blame him, and he dreads them all. Perhaps he has never seen nor head of anyone in like condition, and he feels conspicuous before the world with a mark worse than that of Cain upon him. In his class he stands with beating heart, trembling in every limb, as he sees his turn coming, and when it comes, shakes his head to indicate that he does not know, when he does; loses his mark and stands at the foot, when he might be at the head. He goes hungry, because he can not ask for food, and eats what he does not want, because he must say the easy word. Very early, life is turned into bitterness because the fact that he wants to say a word is the great reason that he can not say it.

As he grows older, he stays away from merrymakings

and good times, because he seems to see every eye directed toward him and knows that any attempt to speak will make him conspicuous. He is always looking this way and that, to see if any person is approaching who will speak to him, and turning corners and dodging down alleys to avoid what may be an acquaintance in the distance. He loses trains, because he can not ask for his ticket or tell where his baggage is to go. Nothing is so obedient as a muscle trained; and on his way to the station, with mind preoccupied, the first hint that he is to purchase a ticket may be the tightening contraction. He dreams for months over an expected interview that may never come, especially if he is to introduce himself, as his own name stands first on the list of impossibilities. He makes a plan of what the conversation will be, and wonders if he will be able to speak certain words, and when the time comes he has worked himself into such a mental condition that probably he can not speak at all.

It is well if he must find some occupation, for it will perforce divert his mind from himself. But it is hard for a man to keep books all his life, when his tastes and conscious ability would open to him the widest field. Said one: "I hesitate badly and am growing worse. I have limited means, have lost my position, and life is a failure, because of my defect." Said another: "I work for daily

wages, when I might be in good business. I am an out-cast from society, treated with contempt, and scorned by my inferiors, when I know that I might have a place among the best. Is He a just God, who can send such an affliction upon one who has done nothing to merit it? Sometimes I can talk with those who can understand me very well for a time, but I can not read aloud, even when alone. If I should try a course of treatment and it should fail, I do not know what the result would be."

Sometimes one who might shine in society does menial work, because all other avenues are closed to him. He associates with low companions because they notice less his infirmity. Neither the social nor the business world opens its doors very wide to one who seems to go into convulsions with every word he attempts to speak. "If I could only talk!" is the wail that goes up from his inmost soul, through every waking moment. It is the last thought at night, as he goes to sleep, the first as he awakes in the morning, and he dreams of it all through the night.

Sometimes the contraction is evident even when not speaking, and he dreads to appear on the street in the daytime, and yields to the temptation to use a stimulant, depending upon its bracing effect to carry him through an ordeal. In this way, not unusually, a drinking habit is formed, but in the reaction stimulants leave the subject

worse than before. If he tries to find diversion in entertainments, not infrequently he is forced to witness a painful caricature of himself. It is to be hoped that our higher civilization and wider knowledge will oblige us to frown upon such characterization. Nothing but inexcusable ignorance of the nature of this painful malady can induce any performer so to outrage the sensibilities of so large a portion of any community. It is not to the credit of any publication, especially if for the young, to put upon its pages anecdotes or stories representing speech-hesitancy, for there is no one who has the difficulty who would not be pained by them deeply.

Another type of the mental phase is that of one who uses such extreme care that he seldom hesitates. By constant practice he becomes an adept in the use of synonyms. If one word will not do, another may. I knew of one person who never began a sentence with the first word that presented itself, and he never hesitated, except when obliged to be literal. I have talked for hours with others who, to an unpracticed ear, would give no sign of hesitancy, because a collection of words was laid away that could never be used under any circumstances. Another list might be used if the conditions were favorable, and so the entire vocabulary was classified. Every word was spoken with an extreme care conspicuous in every move-

ment, until the whole atmosphere was one of painful restraint.

It is true that a few who would gladly drop the burden are so happily constituted that they do not allow it to hinder their success in life, and some can even make it a matter of jest. One who had opportunities of meeting such persons said: "I know some who hesitate and they get on very well." But it was because they got on very well that he knew them.

CHAPTER III.

My own hope is a sun will pierce
The thickest cloud earth ever stretched.
—*Robert Browning.*

PRIMARY schools have been called, with truth, "breeding-places for speech-hesitation." For this there may be several reasons: Many children are so nicely pivoted that only a little forceful explosion of the vowel from the throat and a little more energy placed upon the articulations, are all that is necessary to destroy the slight balance and cause them to hesitate. Perhaps a child hesitates but little, and by encouragement and the right kind of instruction would overcome the slight impediment. It may be that his friends have avoided giving any attention to it, thinking that if nothing was said, he would be less conscious of the infirmity, and be better able to outgrow and overcome it. But he has discovered that he can not speak certain letters and words, and has begun to avoid them and substitute others. The teacher does not understand that no word or sound is difficult except as it is made so by the contraction; i. e., that the word is simply subject to the condition.

If one grasps his pen with all the energy that can be concentrated in the muscles of the hand, he may not be

able to write, but the pen is not at fault, the impediment is the misapplied force.

The child receives the usual phonic drill, direct attention being given to the troublesome sounds, and when he struggles through them and repeats them after the teacher, it seems like a victory. But it is a victory that is worse than a defeat.

Reading is usually more difficult than speaking, because every word must be rendered literally, and learning reading as it is now taught is a dangerous experiment for a child inclined to hesitation. School is a very trying place for such a child. He is sensitive, and knows that every ear in the school is on the alert to hear and to magnify every fault. He is met by anything but loving sympathy. The boys and even the girls follow him with taunts, shouting into his ear the words of which he is most afraid, and imitating his efforts. They little know their own danger. The tormenting spirit in boys is stimulated by the helplessness of the object, who knows that to undertake a word in return is to expose himself to still greater ridicule. So, as a rule, he suffers in silence.

A young man told me of a boy who pursued him more relentlessly than his other companions, and one day his courage was aroused to answer as best he could,—that his greatest hope was that he, the tormentor, would live

to hesitate as badly as himself. This amused the boy so that he put greater determination than usual into his imitations. "To-day," said the young man, "he hesitates worse than I do. I can to-day count twenty who hesitate because, when boys, they imitated me. I am careful about speaking in the presence of children, because of their imitative faculty."

Teachers can do much to make or mar in this respect. Some, by their kindly helpfulness in encouraging and in screening a child from the rudeness of the other pupils, will sometimes give one who is not confirmed in the difficulty sufficient confidence to carry him along. Others will make him unnecessarily conspicuous and by their lack of kindly tact fix what might easily have been removed. Several have said to me: "I was made to hesitate by the severity of my teacher;" and others who, to all appearance, had no trouble in speaking were in daily fear of the teacher. Finally a day came when some unusual little severity sent the contraction with a grasp to the throat, and it never lost its hold. I have known children who would hesitate the year through under one teacher, and talk perfectly with another. A quick, short, sharp, incisive manner, however kindly, is very trying to one who hesitates.

A child who hesitates is a constant menace to all the

rest. Besides those who take great pleasure in making him wretched, many who do not directly intend to imitate him do so unconsciously. Children in the primary schools, being at the imitative age, are uncontrollably attracted and fascinated by anything out of the usual course, especially if it is unnatural. A mother of several children told me that when they were in the lower school-grades, there were always some who hesitated. Her children took no pains to imitate them, but they continually caught it up. Said she: "I thought that in spite of all I could do, I should have a family who could not talk; but I managed to carry them through." All are not as fortunate.

Children are sensitively and delicately organized. With many persons, the chief means of control is fear. The child so conditioned dreads from day to day meeting the teacher and the children with whom he is associated. He knows that every attempt at a recitation is an exposure to ridicule, and out of school-hours he thinks of it continually. Through the year he becomes accustomed to the teacher and one class of scholars, but through vacation his mind is constantly dwelling upon the thought of the new teacher and the new class that he must meet. The question is: "Will the teacher be patient with my infirmity, and will the pupils be more, or less, insulting than those in the old class?" Generally, the hesitation that com-

mences and is developed in the primary school increases through the different grades, until the child can neither read nor recite.

Few contract the difficulty after reaching ten or twelve years of age, because by that time the muscular action has become fixed. For the same reason, the difficulty of changing the action after that time is increased. At the present time, prevention is one of the strong elements in all remedial work. We guard our schools carefully against every other form of infectious disease, but to this the doors are open wide, in spite of the fact that some children, by hearing another hesitate only once, may be wrecked for life.

It is an ungracious act to criticize, especially when one stands alone and aims his criticism at a practice or a belief that is generally accepted as the highest and best; but this must not deter me from saying that our phonic system needs revision, before it can be safe for any child. By the forceful practice of consonants we are helping on that great power of misapplied strength which is the bane of pupils and the discouragement of all teachers of the voice. Speech is the clothing of the thought. Is the thinker helped, either in speaking or in singing, by being reminded that a word ends with a *d*, *t* or *s*? Besides the great energy employed in making them so prominent, so

much strength is drawn from the grasp at the centre. "Does she not articulate well?" asked one, of a singer. "Yes, almost too well," was the answer. And it was true, that the singer was soon unable to sing at all. The German language abounds in consonants, which may be the reason why it is so unsafe to practice German songs. Works upon the voice usually close with a chapter giving exercises for those who hesitate, which should never even be seen by them.

Pupils who come to me, almost without exception, report that nothing so increased the hesitation as the phonic drill received by them in school; and my greatest anxiety for them is that, on returning to school, they may be exposed to it again. One with the tendency to hesitation can not with safety hear it. If such a statement as this had been made to me twenty-five years ago, I should have resented it; but now my eyes can not be closed to the truth, which is that phonics, as they are taught, induce hesitation faster than we can by any means correct it, and where it is the most conscientiously taught, the percentage of hesitation is the highest.

Without doubt, the remote cause of hesitation is misapplied energy. When a child labors under all the contraction that can be possible and be able to speak, a slight influence may bring that contraction to a focus. A child

four years old visited for a few hours one of about her age who hesitated in her speech. On her return home she imitated the child. Her friends were at first amused, but after a few repetitions, it became a fixed habit and lasted through life. It is a common occurrence that the affection is communicated by a nurse who is herself under its influence. It may be explained here that it is not necessary for one actually to hesitate, in order to communicate the difficulty. A marked throat-contraction, if imitated, may be all that is needed to carry it to a child sensitive to this influence.

Twins eight years old were in school together, and a little afraid of the teacher. One day a question was put to one of them with more than usual directness, and he could not answer. He was supposed to be obstinate. When he went home his parents thought the same, but when he tried to talk it was with the greatest difficulty that he could speak a word. In two or three days his brother went through the same experience, and neither of them was ever able to speak with any freedom. The contraction, once focused, will remain.

A boy eight years old met a man on the street, who inquired the way to some place. It was done in so imperative a manner that the boy was frightened and could not answer. This enraged the man, who thought that the boy

was making fun of him. The boy went home in a state of intense excitement, and for some hours could not utter a syllable. From that time he spoke with marked hesitation. In my experience, whooping-cough, diphtheria, scarlet fever—any disease that affects the throat—may be sufficient to fix the contraction. The cough that follows a common cold, laughing with effort in the throat, as so many do, or a blow on the head, is liable to produce a like result. A boy exclaimed: “Ha, ha, ha!” several times, for fun, and it ended in hesitation.

A serious misconception is the classing of these cases with those of deaf-mutes, and subjecting them to the same kind of training. Deaf-mutism is one thing; speech-hesitation is quite another. A deaf-mute must learn every particular sound; but is it necessary for one who has formed every sound in every combination until he is six, eight or ten years of age, and perhaps has spoken with unusual clearness, to learn the structure of speech, if a fright, blow, or severe illness—any abrupt shock—comes and he suddenly hesitates? This minute he talks; the next he can not. Is it because he suddenly forgets how? I think not. The truth is that he, like most of the world, has practiced a great deal of throat-contraction, and one of these influences was the last, decisive stroke that caused a little more determined focusing of the unnatural strength, and the slight balance was lost.

"Why does anyone talk like that?" said a person to me, referring to speech-hesitation. I said: "Why do you use your throat in that way?" "I do not know," was the answer. Then I explained: "He makes that contraction a little more than you do; that is all. The result is what you see." It may be added that the questioner had pain in the throat with every slight cold.

The early part of my work was a line of experiments with different methods, with no settled opinion in regard to the cause. If cases differed in severity, the reason for the difference was not clear; and what one was able to do, it seemed reasonable to expect of another. A run of mild cases for a time seemed to favor the impression. One to whom the process and the reasons were explained caught the principle, at once put it into execution, and was soon out of the difficulty. Another young man I saw twice, about fifteen minutes. He bravely held to the right, although it was new and strange to him, and the wrong by degrees disappeared. He spoke in a falsetto voice, which was caused by the contraction.

Just as I had taken my seat on a train one evening, for a ride of half an hour, a young man took the seat by me, and began at once telling me that he had been for some years preparing himself for a public speaker, which for evident reasons he could never be, unless his obstacle

could be removed. At once the whole matter was explained to him and he took a lesson on the train. Two years afterward I heard from him. He had been able to use the instruction with entire success.

Another young man, who was in danger of losing his place and who, when it was most important that he should speak, could not utter a sound, took ten lessons, and was able to take up the work and carry it out for himself, until he could speak perfectly. His case, although severe, was uncomplicated, i. e., the contraction centred at the vocal cords, and had not communicated, to any appreciable extent, to other centres.

A young man who could never buy an article at a store, a ticket at the railway ticket-office, or make a call, without the greatest difficulty, was able to do all these with perfect freedom, after three weeks' instruction; and he completed the work by himself. These all were cases of simple throat-contraction. The seriousness of the case depends upon the rigidity and extent of the contraction, and the degree of mental complication.

A young woman, after the first day's training, would stop instantly when she saw that she was going wrong, and she never hesitated after the third or the fourth day. It must not be understood that all tendency to hesitate was gone in the time mentioned, in any of these cases,

but the persons persistently aimed at the right and refused to practice the wrong. The cases were not complicated and the gain was steady and sure.

Two young women who were anxious for an education and who could not attend school because of their inability to talk, began school when partly relieved, grew stronger as they went on, and became teachers.

A young man in whom the contraction extended from the throat to the jaw, lips, tongue, eyes, and finally to the hands and the feet, and who could speak but very little, came to me during the winter months. He did farm work, being unable to obtain other employment on account of his disability. After the second winter he found a good situation and has had no further trouble.

One case was of a young man suffering from chorea. His hands were closed with thumbs turned in upon the palm, and he had no thought that they could be opened. It was necessary for someone to cut his food. There was a great deal of contraction in the face; the head shook and shoulders lifted. After exercising the breathing-muscles in the usual way, the young man was surprised to find his hands open upon the arms of his chair, and a general relaxation of all the muscles followed. The speech gradually became free, and the whole system was restored to a natural condition. This case confirmed

the opinion that nervousness was an effect and not a cause.

A young man of nineteen came to me, directly from Scotland. When eight years old, a door was blown against his head, and from that time he was unable to speak. It was the opinion of the best physicians in Glasgow that he could never be made to speak. He communicated by writing, and the mental complication was strongly developed. Sometimes, hopeless as it was, he would attempt to speak a word, and the evident strain showed that every muscle in the system took part in the effort. In this, as in some preceding cases, the question was how to find a beginning; but the same process that had unlocked the bars in other cases opened the way in this, and soon the young man could utter words, and it was not long before he could read to me, and converse very well. He was so sensitive that he would falter if anyone passed through the room, but, being encouraged, after a time he read with the class, and at the end of ten months, when he left me, he could transact business anywhere, and was speaking at public meetings.

In several cases where speech was impossible, words and their meanings were fully recognized and understood when seen in print, but there was no mental connection between the printed and the spoken word, and it was

necessary to learn it as something new and foreign. A boy six years old, knowing that he could not speak (the reason was a contraction at the glottis) refused to try. When the right way was explained to him, he put it into practice at once, and in three days was talking with perfect freedom. This went on well for a while, but he was not kept under training until strong, and the result was a relapse.

In the first place, the boy did well to keep silence. In that way communication of the difficulty to other parts of the system was avoided; but, after once talking well, he dropped back by degrees, and then he chose the struggle with the contraction rather than the silence. The contraction was very great, and became communicated to the muscles of the neck, right arm, and right leg. When he returned to me in about two years, he bent his head from side to side and lifted his right leg and right arm in his attempts to speak. His parents expected that the first experience would be repeated, and it was difficult for them at once to see that we were now dealing with a very different case; but the work was finally accomplished.

When the contraction extends to hands and feet, the case is considerably complicated. Two young men whose symptoms compared almost exactly were receiving in-

struction at the same time. The feet were lifted, the hands contracted, and the winking of the eyelids was abnormally frequent, showing that the contraction extended from the top of the head to the sole of the foot. One believed in what he was doing, and held and used every gain that was made, and so worked on perseveringly until entire freedom was gained. The other had no faith, could see no good in anything that did not bring perfection in a little time. When a gain was evident, he believed it would not last, and proceeded to prove his position by refusing to continue the practice. Of course, all work with him was a failure.

Wherever the contraction centres, the sense of weakness that follows will, like any other physical ailment, affect the mind in a degree; but it is only when the prominent symptom is speech-hesitation that the mind suffers seriously. But the mental complication is an effect and not a cause, and in all cases that have come under my observation, the organs of speech are without fault; and besides, when the physical disability is removed, the mental affection gradually disappears. There may be some question, however, whether the great strain caused by the contraction may not in some cases affect the brain.

One who took a three weeks' course with me said that he could both hear and see better, as the contraction came

under control. A marked feature of his case was that he felt a pressure in the right side of his head which, when he tried to talk, was almost a pain. The contraction in his case was centred in the throat, neck and face. His mind was clearer and he could think better when the strain was removed from the head.

A young lady made a similar report of herself. She had a very loud voice, which had been intensified by shouting, and which seemed directed to the lower jaw. She and her friends had for some time been conscious that her mind was being affected in some way. She wrote after her return home, referring to the effect of the treatment on her mental condition: "It is the difference between a cloudy day and a bright June morning."

A little girl six years of age came to me for training. Nothing had been noticeable in her speech until, when she was about four years old, being outdoors at play, a watering-cart went by, and suddenly sprinkled water upon her. She was frightened and seriously shocked, and from that time she began to hesitate in speaking. The fright created no new conditions, but developed or focused those that already existed, i. e., tightened and fixed a contraction that might otherwise have been overcome. Both legs were weak; she lifted her right foot and right hand and bent her head, her face becoming very red in her

efforts to speak. She was also subject to periodical attacks of nausea. The contraction in the tongue and the jaw was most marked, but no symptom was unusual. She was with me some months, and during that time the effort in the leg and the hand disappeared, and was nearly gone from the tongue. The nausea also disappeared. Considerable throat-contraction remained, but was gradually becoming less. At this stage a removal to a distant city interrupted the course of treatment. At that time she seemed to be on the road to perfect recovery, and, indeed, to the general observer she appeared well. If all influences had been favorable and if hers had been an ordinary case, she would have continued growing stronger; but when she caught a little in the throat, a boy imitated and laughed at her, and, being sensitive, it was more than she could bear. From that time she grew worse. The contraction in the tongue assumed a more violent form, and the disability in the right arm and leg returned, and so increased that both became useless. Finally, it became evident to those who understood the symptoms, that the brain was in some way affected. She was a very interesting and intelligent child. If there was brain disease in the beginning, could the unfavorable symptoms have been removed by vocal training? The specialist who examined the child saw symptoms indicating a tumor of the

brain, but he stated also that some symptoms necessary to prove it were wanting. The child died at the Massachusetts General Hospital. A post-mortem examination showed a diseased brain, but, as reported to me, there was no tumor. One of the best authorities, who examined the child before she went to the hospital, thought there might be a small chance for her recovery. Since noticing with greater care the effect of gymnastic exercises, I think that we may have lost the slight chance by encouraging her to use her limbs while they were in an abnormal condition.

The contraction may exist as an all-prevailing influence throughout the system, and never centre at any given point, unless developed by fright, fever, whooping-cough, or any other positive influence that brings it to a focus.

Children under the influence of abnormal muscular contraction dread to be alone, and are likely to be afraid of the dark. They are commonly styled "nervous children." To spring at a child to frighten away hiccough is an unsafe thing to do, and cases of convulsions have been reported to me as caused by tossing a child in the air just for exercise or for fun. When the contraction exists in this general way, as nature is helpful, strength may be unconsciously established at the true centre, or a slight overbalance at any point may be overcome, and then the child

outgrows it; or the contraction may at any time develop any conditions of which it is capable.

As a case of serious misplaced contraction develops, it may change character and show new and more aggravated symptoms. A child eight years of age had scarlet fever, which induced speech-hesitation. After a time the hesitation stopped and epilepsy followed. A young man whose physical system suffered severely from the contraction and in whom speech-hesitation was a marked symptom, met with a great disappointment, which developed epilepsy. In some serious cases of speech-hesitation it has been noticed that one of the parents was an epileptic.

CHAPTER IV.

Truth is the strong thing.—*Robert Browning.*

ALTHOUGH the mild cases opened the way to a general knowledge of the nature and consequent manner of treatment of this peculiar malady, it is from the severest cases that positive information has been obtained. If a child does not cry at birth, he may be a cripple without a voice. If the cry is produced with difficulty, he lives under the disadvantage of a partly disorganized condition, varying in different individuals. In Rhode Island any person having charge of an infant is expected, if the eyes are not in a perfect condition, to report the fact to the health officer immediately. This is an act to prevent blindness. We are looking for some way in which to prevent speech-disturbances. As the conditions that develop all the various symptoms, including speech-hesitation, begin at birth, would it not be well for all who have the care of children to know and to be able to report the voice-conditions of every child? We shall sometime reach that point. If to-day our kindergarten and primary teachers were models in all that relates to the voice, and were required to train their pupils properly, much might

be done in the way of prevention ; but the training should begin by imitation, before the child learns to talk. In this way all mental complications would be avoided, and the speech would not be in the way of the general development. The most pernicious advice that can be given is, "Let him be; he will outgrow it." It is as two grains of wheat hidden in two bushels of chaff. There is no error so hard to meet and to refute as one that contains an element of truth. It is true that a few, in whom the contraction is slight, outgrow it; but, unfortunately, it is equally true that the multitude do not.

Sometimes a little common-sense training, like "Wait till the excitement is over," or reading aloud, declamation, talking out courageously, or speaking the words with decision, may relieve the self-consciousness and restore the needed balance. Many a mother has saved her child from a chronic condition, by obliging him to stop till he could speak without hesitation. Counting any number before speaking has the same effect. Any emotion crowds toward the throat; that removed, the contraction drops to its proper place.

Avicenna, an Arabian physician, born in 980, recommended taking a full breath before speaking. Perhaps no device has received more attention or done greater injury. It is opposed to nature's economy, which is to do the

most work with the least material. It is a common but false notion that a person who hesitates speaks upon exhausted lungs. Some, because of the contraction, do exhaust the lungs when beginning to speak; so do many who do not hesitate. Every inspiration is sufficient for ordinary speaking; more than that embarrasses and hinders. Just stopping to take a full breath may help one over a hard place for a time, but the effect is weakening and leaves him less able than before to meet an emergency. Besides, it becomes, as any trick or device may be, a subterfuge, which is an unsafe reliance.

Several cases have been reported to me which were very successfully treated by whipping. When the child began to hesitate, the father, and sometimes the mother, administered the chastisement. It is a most unsafe experiment. Many children, if subjected to it, would be liable to be thrown into convulsions or seriously injured mentally.

In a few cases, a slight movement called "a trick" may give relief. But tricks should be used with caution, and never in serious cases, because one may in this way add tension to an already overstrained part. In this haphazard treatment, which gives no definite aim, what helps one is not likely to relieve another.

The person who cures himself is everywhere. Meeting

such cases frequently, a special study was made of their peculiarities, in the hope of gaining from this source a more direct and satisfactory light. Most of them told me frankly that they had no idea how it was done. "I made up my mind that I would not hesitate; that is all that I can say about it." Others said: "My mother stopped me every time I began to go wrong." One lady applied for a position, which was refused because of her speech-disability. She promised that she would stop the hesitation at once if the position was given to her. As her character eminently qualified her, the place was given, and she carried out her determination to the letter, but could give me no hint of how it was done.

Others have said that when old enough to be sensitive in regard to their affliction and to see the disadvantages connected with it, they have managed, in some way unknown to themselves, to gain control of it. Others, by assuming a confidence they did not feel, have risen above it. One gentleman said that when a boy, his associates urged him to join a debating society. He declined, explaining that he could not, for obvious reasons, take part in debate. But the boys wanted him, and induced him to join. They knew that in every other way he was fully their equal, so they urged until he was induced to make a trial. The boys were helpful; he got on better than he expected;

the experiment was repeated, and in this way he overcame the whole trouble. He does not know how much he owes those boys. If they had laughed at him, the reverse would no doubt have been the result.

A person said to me: "I do not see why one needs assistance to overcome speech-affection."

"Do you understand the difficulty?" I asked.

"I think I do; I had as much trouble as anyone could."

"How did you overcome it?" I inquired.

"Just as I do everything else; when I make up my mind to a thing, it is done."

Very little of the information gained in this way was suggestive or helpful.

In my experience this trouble is usually intensified in the second generation. Many a father who has "cured" himself expects his son to do the same. The father has no knowledge of the way in which he found relief; he can make no comparison between his own case and that of his son, whom he charges with want of will. He does not know that while one may be so conditioned that an exercise of will is all that is necessary to carry him through, another, by the exercise of the same amount will, may only increase and tighten the contraction. A father need never expect his son to follow his example in this respect.

In other diseases we expect difference of degree, and

this is no exception. That a person must experience the difficulty before he is fitted to give instruction is one of the superstitions growing out of the general ignorance upon the subject. Upon this principle, a physician should contract all the diseases he is called upon to treat. The differences caused by heredity, temperament, and the almost endless variations in the extent of the contraction, can only be understood by comparing many cases one with another, from the general standpoint of cause and effect. There is a limit beyond which no case can be outgrown, where shouting, or the exercise of will, but tightens the fetters already too closely drawn; where all the simple means that have indirectly given relief to many are not only useless but harmful. Persons so conditioned never find the way blindly; the difficulty is radical, and must receive radical treatment.

Two distinct principles enter into the formation of perfect speech,—absolute hold of the breath, centring where it turns to go out; and absolute let go above that point. If any deviation from these conditions exists, the remedy lies in a return to the normal. If a person overcomes any phase of the muscular disorganization, of which speech-hesitation is a prominent symptom, it is because, either blindly or otherwise, he finds these principles, and puts them into practice.

Every teacher has been limited by the traditionary opinion that all that is necessary to be done is to learn to talk; therefore, a "perfect and permanent cure" should be effected in a short time. He is also expected to cure every case without any exception, and every case is to be placed beyond the possibility of a relapse. This is to be performed by some magic or sleight of hand on the part of the teacher, which leaves the pupil free from all responsibility.

I asked the clergyman who took lessons of Mme. Seiler how long it was before all tendency to contract the muscles of the throat was gone. He said: "From three to four years." He took lessons four weeks, and went directly into his pulpit. When he felt the contraction rising, he stopped and waited until it had dropped to its proper place. He did the same in conversation. He said: "It is death to me to allow the wrong, and life to do the right; therefore, I never speak under the influence of the contraction."

When we consider that the conditions which lead up to speech-hesitation begin at birth, and that the muscles which are to be brought into exercise have been for years in a chronic state of disuse, we can understand that in many cases they must be brought into a state of activity by the exercise of the greatest care, because overwork re-

acts upon the throat-muscles and increases the contraction.

It should be known, also, that it is the few who suffer no recurrence or relapse. A small percentage will gain steadily to the end, but the ordinary and especially the severe case will be liable to relapse; there will be ups and downs until the muscular energy has gained a normal strength. Whenever one is tired, or suffering from any physical ailment, the old contraction is liable to assert itself. At such times it would be well to remain quiet, because one gains only when doing right. When a person has lived under the great strain for years, he loses the power of comparison in this matter, and if the load is partly lifted, he may believe himself to be perfect, when the work is only begun.

Occasionally one will be able to hold a part gain, but, as a rule, there is no safety except perfection, and the pupil should remain under the eye of a teacher until he knows the difference between right and wrong, and can do the one and avoid the other. The most discouraging feature of the work is that one must go back to what should have been accomplished when learning to talk, because human nature revolts against a backward movement; but whoever will pursue it patiently, persistently, and perseveringly will conquer in the end.

It is like aiming at a mark. At first there will be frequent failures, but if the aim is continued the time will come when the mark will be struck always; i. e., every word will be spoken without misplaced contraction.

CHAPTER V.

There is much music, excellent voice, in this little organ; yet can not you make it *speak*?—*Hamlet*.

ONE form of serious speech-disturbance is undeveloped articulation. We meet persons frequently, who omit a sound or substitute another. Common illustrations are the omission of the letter *r*, or the substitution of *w* or *l*, *d* for hard *g* or *k*, or the combination *th* for *s*, commonly called "a lisp." Speech begins with short *u* or *ugh*, and they are often made to fill the place of any other vowel. The diphthong *ou* is often substituted for long *i*, and there is a general inability to make the vowel-sound true to its character. Any failure in this respect suggests a reversion to a primitive type. The Chinese as a nation omit *r*; the Ephraimites used *s* in the place of *sh*. Travelers have stated that the Society Islanders can not pronounce the hard *g* and *k*; i. e., they never lift the back of the tongue. In learning to articulate, a child does what is easiest. The lips when at rest are in position to form labials. For that reason a child may say "mama" and "papa," and go no farther. The dentals are nearly as easy, as the tongue when at rest is in the proper place for their expression. In forming other consonants, the

tongue or the lips must make a special movement if the sound is produced; and if one is not imitative in this respect, and is not able to connect the sound with the exact movement that produces the sound, his speech may be a jargon. An omission or a substitution in the case of one sound is noticeable, but in some cases so many letters are omitted or substituted as to render the speech unintelligible. When the entire articulative process is so changed, something like a new language is formed. Sometimes several in a family are so affected, understanding each other but having little verbal communication with the outside world. This is not owing to originality. Usually the disability is keenly felt, and the child is glad to learn. The parents and the nurse learned to talk unconsciously, and have no knowledge of how to correct the error. The contraction that causes speech-hesitation is found in every varying degree, in complication with this form of speech-affection. The weakness at the centre causes an abnormal peripheral activity. The child perhaps is sent out to run off that misapplied force, when what he needs is energy at the centre. Sometimes the abnormal energy is so great as to suggest insanity. As the power of imitation differs in degree, some children, as they grow older, will see the wrong and be able to correct it. This usually occurs within the first six years of a

child's life. It is unsafe to trust to this, because every articulation is a muscular action which has a tendency to become automatic by repetition. Some of the best authorities believe that the failure in a child to talk perfectly at six years of age, by simply hearing words spoken by others, is conclusive evidence of mental weakness. There are feeble-minded persons who hesitate in speaking, because muscular contraction in them is indiscriminative. No doubt there are feeble-minded children who fail to articulate, but the large proportion of bright children who can not articulate, but who learn rapidly under proper instruction, proves that this disability does not always mean mental weakness.

Demosthenes did not hesitate. He could not form the letter *r*, and his articulation was not clear. Shouting to the waves was a dangerous experiment, but it succeeded with him, and his voice gained strength. The pebbles obliged him to individualize the words, instead of running them together. It is said that Henry Ward Beecher spent the most of three years of his life in overcoming an indistinctness in his speech that unfitted him for pulpit oratory.

The advice, "Let him be; he will outgrow it," or "He will speak words when he sees the need," is most pernicious for any form of speech-affection. It may be

doing a child an irreparable wrong,—nay, it is almost criminal, to leave out of the first years of his life this greatest means of development. If, as some believe, words are necessary to thought, these children have been obliged to work with very imperfect material. Some of them, having great force of character, keep pace very well with other children; but, in general, to judge them by those who can speak correctly, is making a most unfair comparison. One who has traveled in a foreign country where no one understood his language, will have some conception of the strain upon such a life. Besides, one suffers physically from the loss of the healthful exercise that comes from the constant use of correct speech. If a child has no speech-instinct or desire for communication, he will not learn to talk unless a responsive spirit can be aroused.

A boy nine years old could speak no word so that it could be understood. The tongue through overexercise became so large as to interfere with the swallowing. As it lay out of the mouth, there could be no articulation. The strength in the tongue was greater than in the throat-muscles, therefore there was no hesitation sufficient to stop speech. He was a very active boy, but not strong. He fell frequently, because of weakness of his legs; he could not dress himself, because his fingers were too weak

to fasten his clothing; and he was unable to put on his coat and overshoes. There were growths in his nasal passage, which were removed. Whenever the force is wrongly centred, there are liable to be abnormal growths, or some other form of disease.

These extreme symptoms were new, and the case was watched with the greatest interest. Soon it was evident that as the effort was removed from the tongue and the jaw, the difficulty in swallowing was corrected, and strength came to every part of the system. He was very social, and his inability to make himself understood was a very great strain upon the nervous system. Sometimes he would stamp and scream with all his might, but as the unnatural energy was removed from the tongue, it gradually fell into place. He soon learned to form sounds. In four months' time he could speak any word, and the difficulty in swallowing disappeared. But the most noticeable feature in the case was that, as the great force left the tongue, strength came to his legs and fingers.

The boy did his part of the work well. He never failed in the utmost exactness in carrying out instructions. Another boy, sixteen years old, could speak but two words. He was as conscientious and as anxious to learn as the former boy, but the symptoms were more confirmed, requiring a longer time for removal. This boy was gener-

ally weak. He stooped, his feet dragged, his arms hung in a lifeless way, and he was subject to nausea. As he learned to use his voice, he grew strong, and all the symptoms changed for the better. When he did his first errand at a store, and was understood, the hopelessness in him gave place to courage, and he began to feel that he was a man. At birth it was with difficulty that he was made to breathe, and he was in spasms most of the time for three days.

A little girl seven years of age spoke but a very few words. She had learned to communicate entirely by pantomime. She could generally make us understand by that means all she would have been glad to say. She was in a condition that suggested insanity, and at first an attempt to try to place the tongue and lips was a great trial. Her nervousness was so great that a minute was a long time for her to practice. But soon she began to be proud that she could speak a new word; that induced her to aim at words that she could not speak, and then she gained faster. When she learned a new sound she would for some time put it everywhere, but every gain made way for another, and now she says most ordinary words, and applies them properly. She has read three Second Readers through, and has commenced the Third Reader. She had a can of water out-of-doors, and someone asked her if

she knew where there was a cylinder. She at once pointed to the can and said: "That is a cylinder." The first word she learned to spell was "cat," and it was a serious process; but now she can learn to spell any word of one syllable by studying it over once or twice. She has been with me a year.

Sometimes the hesitation and the failure in articulation combine in one case. In a little boy of five the muscles of the throat closed when he attempted to speak. He would open his mouth and grow red in the face, but could not make a sound because of the effort in the throat. He appeared to have croup with every slight cold. There was no recurrence of this symptom after the contraction was removed. So many sounds were omitted or changed about, that when he could speak he could not be understood. He brought a pear to me, and asked: "Il a woup?" ("Is it ripe?") That sentence is an illustration of the whole. The child was so sensitive in regard to his speech that he would not try to speak to anyone outside of his own family; but he overcame it all.

Dr. Lennox Browne, in "Voice, Song and Speech," basing his information on the report made by Mr. Robert M. Zug in *Werner's Magazine* for January, 1879, states upon a computation of five in 1,000 in 1870, that the number of those who hesitate in the United States

alone, is almost three times that of the blind, insane and deaf-mutes added together.

In the public schools of Boston, according to the latest statistics, there are 500, or seven in 1,000, who speak with difficulty. One who understands the situation said: "We do not know what to do, so we pay no attention to them till they get so bad that they can not talk at all."

During our great World's Fair in Chicago, the proud boast was made in one of the leading periodicals that every important subject was to be discussed and that the various committees had planned to omit nothing that was worthy of their attention. But this great army of sufferers was wholly ignored. Not a voice was heard even so much as to report whether or not the darkness had been penetrated by one ray of light. Yet in vital consequence it might well have stood at the head of the list.

It may be questioned if a work so important should be left wholly to the judgment or the caprice of parents, and if it would not be proper for the State to know how many and who are affected with speech-disability, and oblige the parents to attend to it, furnishing a school for those who are unable to bear the expense. A difficulty that disables a young man from joining the army is certainly worthy the attention of the government.

The terms generally used in defining speech-hesitation

are omitted in this treatise, because, first, they give undue prominence to what is merely *one* symptom of a serious physical derangement; second, persons showing that symptom are not a unique and separate class, as has been supposed, but the conditions that often exist in a marked degree in many not suspected of any speech-irregularity are exaggerated in them; third, the words are in themselves so unpleasant and conspicuous as to be objects of dread to those to whom they are applied. It would be well if they could be stricken from the language.

For the same reason the word "defective" has not been used. Speech-hesitation has but one cause, which is misplaced contraction. Defect in the organs of speech has no connection with the subject under discussion.

Dr. L. G. Howe, at the laying of the corner-stone of a public building at Syracuse, N. Y., said: "The institution whose foundation-stone is to be laid will be the last link in a chain—it will complete the circle of the State's charities, which will then embrace every class whose infirmities call for public aid." Evidently the needs of one great army of sufferers had never appealed even to the warm heart of Dr. Howe, and they have not been very well understood by anyone; but when teachers can work under a recognized authority, it must be that the world will respond to this "last" call for public benevolence.

